from the circumstance of their flourishing equally either in fresh or in salt water. The fructification of *Bangia* has hitherto been obscure; it has recently been investigated by Dr. Cohn in 'Schulze's Archiv,' 1867, Band iii.

In the second family, the *Chantransiaceæ*, there is but one genus, *Chantransia*. And the third family, the *Batrachospermaceæ*, contains only two, *Batrachospermum* and *Thorea*. The former genus has lately been the subject of some very interesting observations by Messrs. Bornet and Thuret* and the Comte de Solms-Laubach†. These observers have independently arrived at similar conclusions with regard to the mode of reproduction in *Batrachospermum*. The details cannot be given here, and, in fact, would be hardly intelligible without figures. The observations of Messrs. Bornet and Thuret are not confined to the genus *Batrachospermum*, but extend to a multitude of other *Florideæ*, and seem at last to have solved the problem as to the mode of sexual reproduction in that tribe of Algæ.

Hildenbrandtia is the only freshwater genus in the fourth family, the *Hildenbrandtiaceæ*. It has been the subject of some observations by Mr. Carter in Seemann's 'Journal of Botany' for 1864, p. 225.

Lemanea, Bory, a singular genus, beautifully figured by Kützing in his 'Phycologia Generalis' (pl. 19), and *Compsopogon* of Montagne, represented in Europe by a single species, *Compsopogon Corinaldii*, Ktz. (*Lemanea Corinaldii* of Meneghini), compose the fifth and last family, the *Lemaneaceæ*, with which the work closes.

It is hoped that enough has been said to give a sufficient idea of the nature of Dr. Rabenhorst's work, and to show the important assistance it will render to all who are engaged in the study of freshwater Algæ. The difficulty of making any entirely satisfactory classification of plants so little resembling one another as the different tribes of Algæ is very great. In judging of any arrangement, it will always be necessary to bear in mind that (as Messrs. Bornet and Thuret have remarked) the name "Algæ" does not represent "un ensemble nettement limité," that it is, in reality, only a common name under which are comprised families belonging to different types, and which have often no other affinities than the absence of vascular tissue and the medium in which they grow.

With these remarks, we can cordially recommend the work before us as an indispensable addition to the libraries of all algologists.

Microscopic Objects figured and described. By John H. Martin, Secretary to the Maidstone and Mid-Kent Natural-History Society. No. I. London: John Van Voorst.

We welcome with much satisfaction the appearance of this unpretending but most useful collection of drawings illustrative of the microscopic appearances presented by an extensive and well-selected

* Ann. d. Sc. Nat. sér. 5. vol. vii. p. 144.

† Bot. Zeit. May 1867, nos. 21 and 22.

series of what we may call working specimens. The design of the author has been, as he tells us, to supply a want felt by many who possess a microscope—namely, a book in which they can find accurate delineations and explanations of the objects usually contained in their cabinets, or of such as are readily procurable by a beginner in microscopic research. The explanatory text indicates in a few words the main features of the organisms depicted, as well as the points of interest they are intended to exhibit, thus enabling the student who may be desirous of examining any particular tissue or peculiarity of structure to select at once the plant or animal in which it may be most easily and satisfactorily displayed; the tyro in microscopic research will in this manner find his exploration much facilitated; and the amateur who prefers to obtain by purchase ready-mounted specimens, such as are now procurable in rich abundance, will be enabled not only to choose without any difficulty such slides as are adapted to his purpose, but (and this is by no means an unimportant consideration) to understand and explain to the uninitiated the lessons they are calculated to teach. The work, when complete, as we learn from the prospectus, will contain about 200 original figures, which, judging from those in the part before us, are well and faithfully drawn; the descriptions are concise, and the subjects sufficiently varied to constitute a very complete and comprehensive assortment, available alike for the instruction of the student of nature and for the amusement of intelligent though unscientific observers, whose curiosity, being thus excited, will doubtless prompt them to inquire more deeply concerning the functions and uses of structures so beautiful and so mysterious.

After having thus expressed our conviction of the great utility of the plan of Mr. Martin's work, and our hope that it may speedily find its way to the counter of every vendor of microscopic objects, we may be permitted to offer one or two suggestions, which will perhaps economize space in future numbers, without at all interfering with the instructive character of the descriptions, the value of which is much enhanced by their conciseness and simplicity. It appears to us to be superfluous to refer the specimens to the botanical orders to which they belong, as, for example, to tell us that the yeast-plant belongs to the Coniomycetous order of Fungi, while the maple-blight is referable to the Ascomycetous order: this kind of information is best obtained from the pages of Hooker, Smith, and Lindley; and the employment of such hard words is not inviting to the generality of readers. Another point to which we demur is the oft-repeated directions of the author that such-and-such specimens should be put up in *liquid*. We had hoped that this most unsatisfactory mode of mounting objects had become obsolete; at least, after forty years' experience, we have utterly discarded it. The most delicate specimens may be put up in the solution of gum and glycerine as readily and as permanently as in Canada balsam: they show the minutest features with the utmost clearness, and are not, like those mounted in fluid, constant sources of chagrin and disappointment.